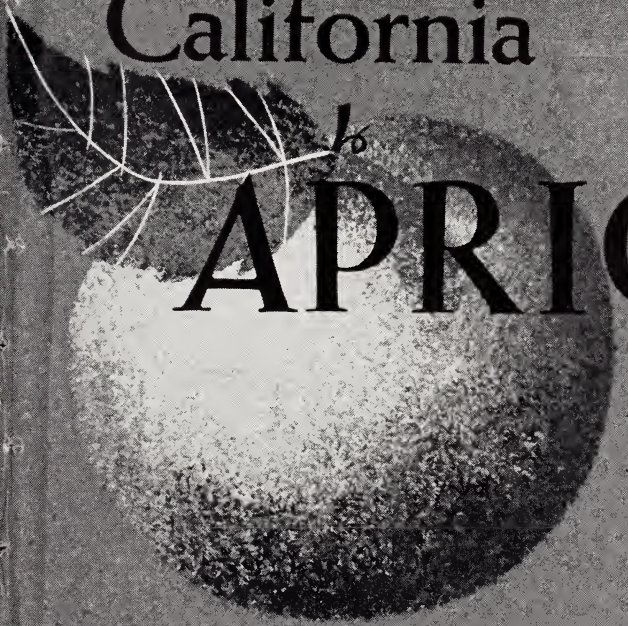
Division of Agricultural Sciences
UNIVERSITY OF CALIFORNIA

TRENDS AND OUTLOOK

California APRICOT INDUSTRY



JERRY FOYTIK

CALIFORNIA AGRICULTURAL
Experiment Station
Extension Service

CIRCULAR 495

THE CALIFORNIA APRICOT INDUSTRY

has undergone important changes during the past 50 years. This circular reviews the factors responsible for these changes and indicates the situation in prospect.

HERE IS THE SITUATION	THIS IS THE OUTLOOK
Acreage—expanded rapidly until 1926, then declined by over half. The decrease was less severe in the major producing areas and for the principal varieties.	New acreage coming into bearing in the next few years will about offset tree removals. Bearing acreage will become still more concentrated in the major districts.
Yield—doubled since 1920–1929 to almost 5 tons per bearing acre. Yield varies widely from year-to-year and among districts and varieties.	A further small rise, say of 10 per cent, seems likely by 1965—provided good cultural practices, now used, are not abandoned.
Production—increased sharply during 1920–1939 and then decreased by a quarter to an average of 185,000 tons maintained since 1940.	Some increase is expected. Large annual variations will continue, as in the past, because of fluctuations in yield.
Canning—has become the major outlet. The quantity canned rose from a quarter of the crop in 1915–1929 to two-thirds since 1955.	Larger quantities will be canned. As much as 75 per cent of the crop may go to canners by the mid-1960's.
Drying—reached a peak of 168,000 tons in the 1930's, then decreased to 46,000. Drying declined from 68 to 25 per cent of sales.	This outlet will become even less important if canning expands as expected. Drying may decline to 20 per cent of the crop.
Fresh Sales—increased gradually to almost 25,000 tons in 1944–1950, then declined sharply to 11,000 tons in 1955–1959. Usually half to two-thirds of these sales are made within the state.	The recent downward trend is not expected to continue. However, a large increase also seems unlikely. Possibly fresh sales will be at 10,000–15,000 tons in the early 1960's.
Exports—represented 35 to 40 per cent of the prewar crop. But, with curtailed shipments of canned and dried apricots after the war, exports dropped to 10 per cent of the average crop in 1945–1959.	Exports are likely to continue at about present level (far below prewar quantities), especially for canned and dried apricots. Fresh shipments may increase but not sufficiently to affect the over-all picture greatly.
Grower Prices—are highest on interstate fresh shipments and lowest for cannery sales. The average seems to be determined chiefly by consumer purchasing power, and to a lesser extent by annual production.	The outlook is for prices at or slightly above recent averages—provided consumer purchasing power continues to climb. Prices should not be depressed unduly except in years when bumper crops are produced.

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JANUARY, 1961

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CALIFORNIA APRICOT INDUSTRY
TRENDS AND OUTLOOK

CONTENTS

The apricot is established as one of California's important specialty crops. Annual production in the state accounts for 90 per cent of the national total and about a third of the world crop. Within the state commercial acreage is confined chiefly to two major varieties grown in a few specialized producing areas.

Apricot production in California started soon after Mission San Diego was founded in 1769. Improved varieties were not imported until the early 1850's and production was largely limited to small fruit gardens until after the overland railroad arrived in 1869.

California accounts for practically all the apricots processed in the United States. The percentage of the state's production canned has doubled during the past 30 years and that dried has decreased by a half, while the percentage consumed fresh averaged almost 10 per cent of the total.

Fresh sales are divided almost equally between local marketings and out-of-state shipments. Fresh apricots from California are marketed early in the season before shipments of apricots from other states and of other fruits become heavy. Apricots constitute 15 per cent of the fresh deciduous tree fruits shipped from California during June when most of the apricots are moved.

THE INDUSTRY

Apricots can be grown under a variety of climatic, soil, and cultural conditions. Commercial success, however, requires that care be given to the selection of a site.

Growing Conditions

Climate is probably the most important factor limiting commercial production. The early blooming habit of the apricot and its chilling requirements (to break the tree's winter rest) precludes commercial production in most fruit-growing regions of the nation. The best climate for apricots is clear and dry weather, with fairly cold winters and only moderately high spring and summer temperatures before harvest. Continued cool, damp weather may cause fruit brown rot. Extremely high summer temperatures (of 100°–105°F or more) during fruit ripening may cause pit-burn and damage fruit quality.

Normal rainfall may provide enough moisture to keep apricot trees alive and to bear some fruit. Inadequate water, however, results in weak growth, small trees, and low yields. In California the great bulk of the acreage is irrigated.

Apricots grow quite satisfactorily on a wide range of soil types. Strong, vigor-

ous growth of the tree, however, is more readily attained on deep, fertile, well-drained loam and clay-loam soils. Lighter soils may require heavier applications of fertilizer and more frequent irrigation for high yields.

Harvesting

The apricot picking season is short. Usually it lasts about 15 to 20 days for a given variety and includes two or three pickings. The beginning of harvest is influenced by the intended outlet for the crop since fruit at different stages of maturity is required for fresh marketing, canning, and drying.

Normally the grower knows the probable outlet for his fruit in advance of harvest. Although a portion of the crop might go to each of the three outlets, the grower ordinarily concentrates on only one outlet. He may, however, use a second outlet for the portion of his fruit gathered on the last picking.

Apricots to be shipped fresh are picked at the earliest stage of maturity. For eastern shipment the fruit is harvested when it shows some yellow color but while it is still hard and firm. Somewhat more mature apricots are used for local fresh sales since less ripening will occur during shipment to market.

Cannery apricots are picked a little later. The fruit should be firm-ripe and have developed a full color, but it should not yet be soft.

For drying, harvest is delayed until further ripening on the trees would make the fruit too soft for satisfactory handling. Fully mature apricots are preferred for two reasons: a higher dry-out ratio results because the fruit has a higher sugar content, and a better grade of dried product results because of the smaller proportion of poorly colored halves.

Producing Areas

Growing conditions are particularly favorable in the coastal valleys, especi-

APRICOT PRODUCTION DISTRICTS

As used in this circular, production districts are defined to include the following counties listed in descending order of present acreage:

Santa Clara District includes five counties southeast of San Francisco: Santa Clara, San Benito, Alameda, Monterey, and Santa Cruz. Half of the state's apricot acreage is located in these five counties.

West Central Valley District includes three counties near the river's mouth: Solano, Contra Costa and Yolo. These counties represent almost one quarter of the total acreage.

Stockton District is composed of Stanislaus and San Joaquin counties in the northern part of San Joaquin Valley. It constitutes 14 per cent of the acreage.

South San Joaquin District includes six counties in the southern part of the valley: Fresno, Kings, Merced, Kern, Tulare and Madera. About 6 per cent of the acreage is located in this area.

Other Areas, representing 8 per cent of the acreage, include all other 42 counties of the state. Eighteen counties have no commercial acreage, 19 have limited plantings of less than 80 acres each, and the remaining five have acreage ranging from 130 to 1,900.

ally those south of San Francisco Bay, and the adjacent counties of the Central Valley. Temperatures are suitable. Irrigation is possible and not too expensive. Insect and disease control is feasible. Conditions in other fruit-growing regions are less favorable for profitable production. These relative advantages are reflected in former and recent plantings.

During the second half of the nineteenth century several varieties of apricots were grown in many areas of the state—usually in small home orchards. As production became more commercialized, varieties less desirable for commercial sales were replaced and, as a result, areas for growing apricots became more sharply defined.

CHARACTERISTICS OF APRICOT VARIETIES

Only a few varieties are of commercial importance in California. Royal and Tilton account for 97 per cent of the acreage. The remainder is planted to Moorpark and Derby.

Royal is a firm, well-colored, highly flavored apricot of medium size. It is used widely for canning and drying and is also shipped fresh. Blenheim is so similar in fruit characteristics to Royal that the two varieties often are considered as one. Official statistics compiled by the state make no differentiation. In this circular the term Royal is used to include the Blenheim variety. Royal and Blenheim were imported to California a century ago from France and England, respectively.

Tilton is lighter in color and flatter in shape than Royal, blooms and ripens somewhat later, and has less tendency to "pit-burn." This variety is also used in all three outlets but less satisfactorily than Royal. The canned fruit is blander; the dried product is less attractive in color and has a lower dry-out ratio; the fresh fruit, though larger in size, is of lower quality. The trees tend more to alternate bearing than Royal but are very prolific in "on" years. The Tilton was originated in Kings County by J. E. Tilton in 1885.

Moorpark is a large apricot of excellent fresh-eating quality, even though the fruit usually ripens unevenly and becomes very soft when fully ripe. The fruit matures and is marketed later than Royal and Tilton. Moorpark is dried but the dried product is variable in color. It is not considered suitable for canning. The trees are irregular and shy bearers. Hemskirke is a variety of very similar character and use. It is grouped together with Moorpark in this circular to conform with industry practice.

Derby closely resembles Royal in tree growth and fruit appearance. However, it tends to set somewhat lighter crops, to ripen less evenly, and to mature earlier. It is especially well suited for shipment to eastern markets but is not desired for processing because the stone tends to cling to the fruit flesh. This variety, first planted near Winters, California, in about 1895, is a good one in early shipping districts because it extends the picking season, especially on the early side. Because of its close similarity to Royal, Derby may be shipped under that name.

Now commercial acreage is concentrated in a few counties. By adding nearby counties with smaller acreage to these production centers we cover the territory included in the principal apricot-producing districts listed in the box. This segregation is arbitrary but convenient in our discussion of the major areas of production. These four major districts represent 92 per cent of the present total acreage: 48 per cent in Santa Clara District, 24 per cent in West Central Valley District, 14 per cent in Stockton District, and 6 per cent in South San Joaquin District.

Varieties Planted

Numerous apricot varieties have been grown in California. They can still be produced successfully, though not necessarily profitably, in several areas of the state. By about 1900 the list of acceptable varieties was greatly reduced. Since 1920 commercial production has been limited chiefly to two varieties. About 78 per cent of the present acreage is planted to Royal and 19 per cent to Tilton. The remainder (3 per cent) is equally divided between Moorpark and minor varieties. Most of the small acreage in minor varieties is in early-maturing varieties, especially Derby, which are suitable to early districts and can be shipped while the prices at consumer markets are still favorable.

Apricot varieties differ, sometimes markedly, in appearance, eating quality, suitability for processing, maturity dates, and other respects. These are summarized on page 5 for the four varieties.

California's Production

Apricots are grown extensively in California, Washington and Utah. The small production grown in other states is limited chiefly to home gardens and for supplying local markets. California accounts for about 92 per cent of the production in the three major states.

The crops from the three major states are utilized in significantly different ways. In California over 90 per cent is processed compared to 20 to 25 per cent in Washington and Utah. The state accounts for all the apricots dried in the United States, about 98 per cent of those canned and frozen, and 55 to 60 per cent of fresh sales. Because of early maturity, the bulk of California fresh apricots are marketed before those from Washington and Utah.

California's importance on the world

U. S. Apricot Production and Utilization, 1950–1959 Average

Use	California	Washington	Utah	Total	California
	1,000 fresh tons				Per cent
Fresh sales	14.8	7.5	3.3	25.6	58.0
Canned and frozen	113.2	2.5	1.3	117.0	96.7
Dried	52.2	0	0	52.2	100.0
Total sales	180.2	10.0	4.6	194.8	92.5
Farm use	1.7	.4	.5	2.6	65.8
Not utilized	0	1.0	.1	1.1	0
Total crop	181.9	11.4	5.2	198.5	91.6
Percent processed	90.9	22.3	24.8	85.3	

Apricot Production in Specified Countries, 1945–1958

Country	1945–49	1950–54	1955–58
	1,000 fresh tons		
California	204	183	174
Other U.S.	31	13	20
Spain	73	70	69
Iran	63	84	67
France	35	44	52
Other countries*	158	204	181
Total	564	598	563
Per cent in California	36.1	30.6	30.9
Per cent in U.S.	41.6	32.8	34.4

* Includes all noncommunist countries with significant commercial production. Individually each has smaller average crops than any of those shown.

scene is indicated by the data summarized in the table above, which represent the great bulk of the world total apricot production. During the past 15 years the state produced about a third; Spain, France and Iran a third; and the rest of the world another third.

ACREAGE AND YIELD

Both determinants of production, acreage and yield, have changed importantly during past decades. Both will undergo further changes. Major shifts for the past indicate changes likely in the future.

Acreage Trends

In 1909 California had 2,992,000 apricot trees. By 1919 the total increased to 4,932,000 (including 3,688,000 of bearing age), on 67,600 acres. Acreage increased to 97,300 in 1926, and then decreased, more or less steadily, to an average of 41,900 in 1955–59—which is 43 per cent of the 1926 peak and about equal to the 1909 acreage.

Bearing acreage expanded rapidly during the first quarter of the twentieth century, reaching a peak of 83,000 in 1928. It decreased to 73,100 in 1939, 49,800 in 1949, and 36,500 in 1959. In other words, the average annual decrease was about 1,500 acres during the past 31 years.

Nonbearing acreage remained high (relative to the total), of course, while the apricot industry was expanding. It reached a peak of 30,500 in 1924, four years prior to the peak in bearing acreage, and then declined sharply to 7,300 in 1930–1934 and only 1,450 in 1950–54. Recent plantings brought nonbearing acreage to 6,100 in 1959.

The large reduction in acreage over the past three decades raises a question: Which acreages were eliminated from production and what new plantings were made? Shifts in the geographic, varietal, and age composition of California's apricot acreage are discussed in the next three sections.

District Pattern

The geographic location of apricot acreage has shifted. For the period 1921–59 as a whole, bearing acreage declined

one-third. It increased sharply in two areas—75 and 55 per cent, respectively, in the West Central Valley and Stockton districts—and decreased 5 per cent in the Santa Clara District and 85 per cent for the remainder of the state. (See figure 1 below).

As a result, the relative importance of the districts changed drastically. The proportion of the state's bearing acreage in two districts increased fairly steadily since 1921—from 37 to 54 per cent for Santa Clara District and from 9 to 24 per cent for West Central Valley District. The Stockton District increased, in relative importance, at an irregular rate—from 4 per cent in 1921 to about 9 per cent for the period 1931–59. For the balance of the state bearing acreage decreased from 50 per cent of the total in 1921 to 12 per cent in 1959.

Commercial acreage in each district is concentrated within a few counties. About 62 per cent of the Santa Clara District acreage is in Santa Clara County and 20 per cent in San Benito. The relative importance of the other three counties is 18 per cent compared to 31 per cent during the mid 1920's.

The county distribution of acreage in West Central Valley District is: 42 per cent in Solano, 36 per cent in Contra Costa, and 22 per cent in Yolo. For Stockton District 63 per cent of the acreage is in Stanislaus and 37 per cent in San Joaquin.

Merced and Fresno represent 63 per cent of the South San Joaquin acreage,

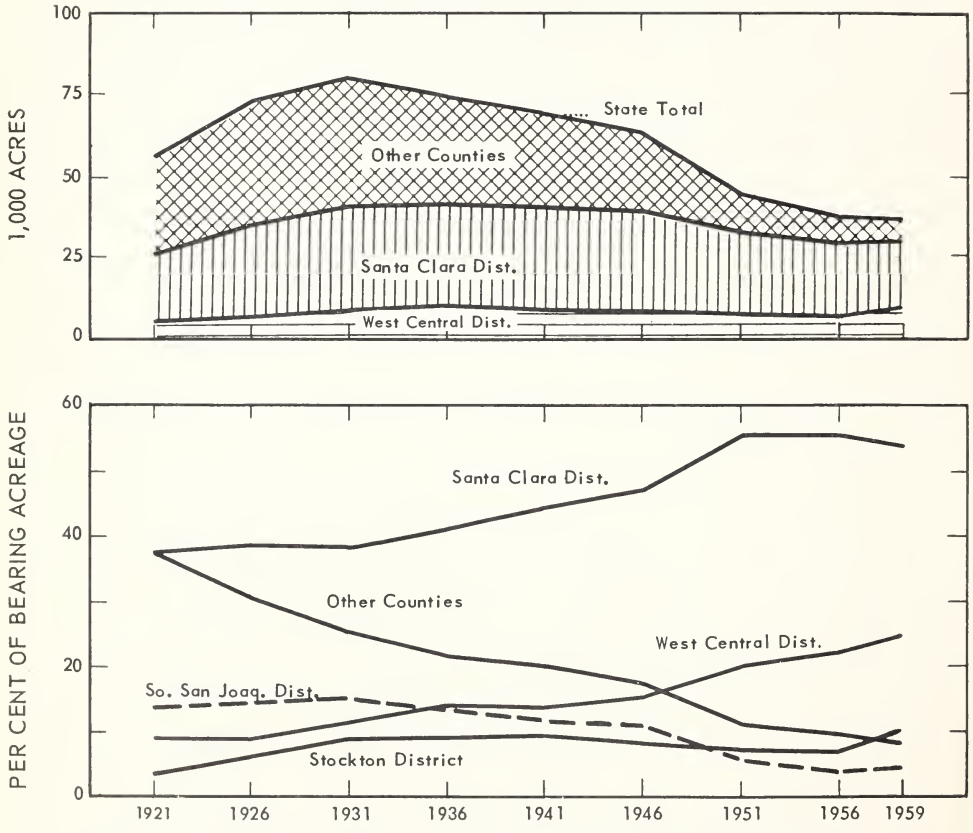

FIG. 1. DISTRIBUTION OF APRICOT BEARING ACREAGE, BY MAJOR DISTRICTS, 1921 TO 1959.

Bearing Acreage of California Apricots, 1936 and 1956

District	Royal		Tilton		Other		All varieties	
	1936	1956	1936	1956	1936	1956	1936	1956
Santa Clara	30,820	21,620	200	140	1,880	690	32,900	22,450
West Central Valley	9,480	7,410	1,720	1,400	530	530	11,730	9,340
Stockton	1,580	1,140	4,190	3,090	1,270	50	7,040	4,280
South San Joaquin	4,770	810	5,170	1,040	1,030	90	10,970	1,940
Other	13,240	3,300	1,380	330	1,350	230	15,970	3,860
State Total	59,890	34,280	12,660	6,000	6,060	1,590	78,610	41,870

Kings 23 per cent, and the other three counties 14 per cent. Three-quarters of the acreage in "other areas" is in two southern counties: Riverside and Ventura.

Varietal Composition

Apricot acreage also changed in varietal composition. Between 1936 and 1959, bearing acreage declined by over a half: 50 per cent for Royal, 59 per cent for Tilton, and 82 per cent for other varieties.

This shift away from minor varieties was accomplished chiefly by removing trees of unwanted varieties and planting new orchards of desired varieties. A variety is "unwanted" or "desired" for several reasons, technological and economic. For example, each variety produces fruit of a typical size, firmness, flavor, and eating quality.

However, the consumer's willingness to pay more for one variety than for another, because of differences in such characteristics, is an economic factor. Each variety typically produces a certain tonnage per acre depending on, among other things, tree age and climatic conditions. Its yield is changed by changing the amount and type of cultural care given the trees. Both economic and technical factors should be considered by the grower in determining the amount of money to be expended for such purposes. These illustrations indicate that numerous factors should be considered when decisions are made as to which varieties are to be removed or planted. The net effect of the expected influences of these economic and technological factors determines whether a given variety is unwanted or desired at a particular time.

As a result, the relative importance of the varieties changed since 1936. Royal increased from 76 to 83 per cent of the total while Tilton decreased from 16 to 14 per cent and other varieties declined from 8 to 3 per cent. A detailed comparison on a district basis, for the period 1936–56, is summarized in the table above.

Age Distribution

The most noticeable change in the age composition of apricot trees over the years is the fluctuation in nonbearing acreage. The proportion of acreage consisting of nonbearing trees continued high for many years and then declined sharply. It averaged 30 per cent in 1920–24, dropped to 8 per cent in 1930–34, and decreased further to 6 and 3 per cent in 1940–44 and 1950–54. Subsequent plantings raised the figure to 14 per cent in 1960.

In 1936 just over half (51 per cent) the bearing acreage consisted of trees 17

years or older. The proportion of such older trees increased to 80 per cent by the late 1940's and 85 per cent since 1955.

The age distribution in 1936 and in 1956 is compared on a district basis in figure 2 below. Important differences among districts are:

¶ Nonbearing acreage increased eightfold in Stockton District and decreased by 40 per cent for the remainder of the state. This district's proportion of the state total increased from 7 to 51 per cent since 1936.

¶ The proportion of acreage consisting of young bearing trees (16 years or less since planting) declined from 26 to 12 percent in the Santa Clara District and from 60 to 16 per cent for the remainder of the state.

¶ Acreage of older bearing trees located in West Central Valley and Stockton Districts increased from 15 to 28 per cent of the state total, continued at about 58 per cent of Santa Clara District, and declined from 27 to 14 per cent for other areas.

Yield Changes

Weather conditions during the blooming, growing, and harvest season largely determine the yield for a particular year. Other forces guide its long-run movement. Shifts in geographic, varietal, and age composition of the bearing acreage have an important effect. Cultural practices alter yield not only for the current season but over the life of the tree.

Figure 3 shows that yield varies substantially from year to year. These annual fluctuations averaged 1.75 tons since 1940, or about 46 per cent of the average yield (of 3.8 tons per bearing acre) for the period. The year-to-year change was 2.4 to 3.7 tons in six of the past 20 years,

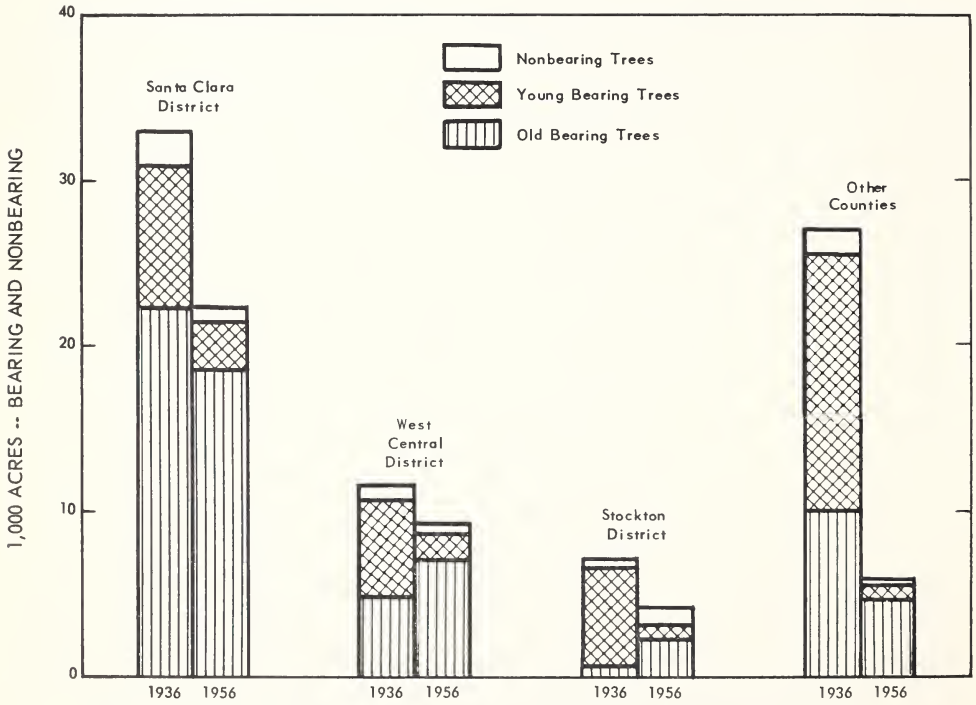

FIG. 2. AGE CLASSIFICATION OF APRICOT ACREAGE BY MAJOR DISTRICTS, 1936 AND 1956.

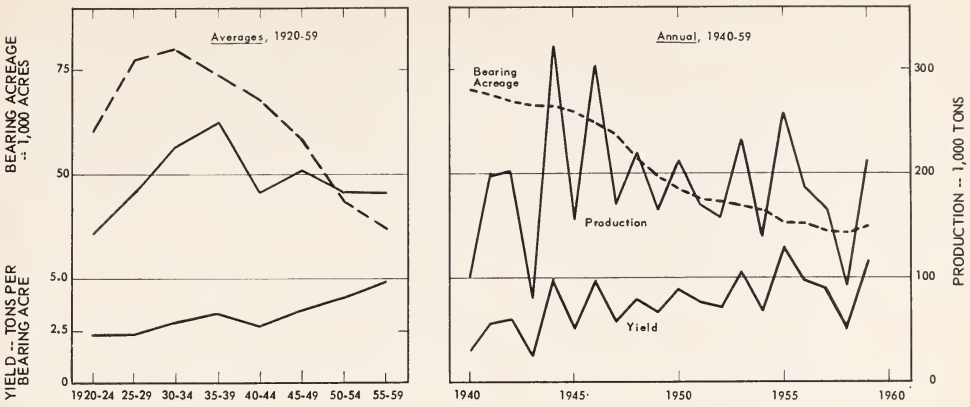

FIG. 3. PRODUCTION, BEARING ACREAGE, AND YIELD OF CALIFORNIA APRICOTS, 1920 TO 1959.

1.1 to 2.1 tons in nine years, and below 1.0 tons in only five.

Such wide variations complicate the problem of marketing apricots. They result in corresponding annual fluctuations in production and hence, to a considerable extent, in quantities available for processing since fresh shipments vary from one season to the next by only half as much, on a relative basis, as do sales to processors. (During the past 20 years annual fluctuations averaged 25 per cent of average fresh sales and 54 per cent of average processing sales.)

Yield varied about a level of 2.4 tons per bearing acre during 1920–29. It increased, more or less steadily, thereafter to an average of 4.7 tons in 1953–59.

Comparative Yields

Over the years yield in California has been about one-third lower for apricots than for other deciduous tree fruits and for grapes. Fruits, in general, increased substantially during the past quarter century. At present, yields are 92 per cent above the 1920–34 acerage for apricots compared to increases of 115 per cent for other deciduous tree fruits and 75 per cent for grapes. Yields since 1920 are compared in the table below.

A comparison of apricot yields for different varieties and producing areas is not possible because production data are not published in a form which permits making such comparisons.

California Yields for Apricots and Other Fruits

Years	Apricots	Other deciduous tree fruits	Grapes
	Tons per bearing acre		
1920–34	2.5	3.3	3.8
1935–39	3.4	4.2	4.5
1940–44	2.7	4.5	4.8
1945–49	3.5	5.9	5.6
1950–54	4.2	6.3	5.7
1955–59	4.8	7.2	6.7

Acreage Projections

It is difficult to estimate bearing acreage and yield very far into the future. For the period immediately ahead, however, a reasonably accurate prediction can be made. Our guides are recent plantings still to come into bearing and probable removal of older or diseased and weakened trees.

The top table below shows acreage shifted to bearing and acreage removed from production for the period since 1919. An average of about 11,400 acres was removed from production each five years. This amounts to 17.7 per cent of the bearing acreage in existence at the beginning of each period. If this percentage rate is continued, about 6,470 acres will be removed. Since 6,110 of presently nonbearing trees will begin to bear, there will be a net decrease of 360 bearing acres during 1959–64.

Actually, of course, trees may be removed at a different rate. If it is at the average rate (14.7 per cent) prevailing since 1954, then bearing acreage will increase 740 acres.

The age distribution data given in the bottom table below indicates that a

Changes in Bearing Acreage of California Apricots

Period	Beginning of period	Addition*	Apparent removal		End of period
			acres†	per cent‡	
1919–24	49,200	18,400	2,420	4.9	65,180
1924–29	65,180	30,540	13,140	20.2	82,580
1929–34	82,580	10,760	15,730	19.0	77,610
1934–39	77,610	5,690	10,180	13.1	73,120
1939–44	73,120	5,820	12,900	17.6	66,040
1944–49	66,040	3,570	19,770	29.9	49,840
1949–54	49,840	2,470	10,910	21.9	41,400
1954–59	41,400	1,210	6,070	14.7	36,540
1959–64	36,540	6,110	.....	.....	.....
5-year average	.....	9,397	11,390	17.7	.....

* Trees of nonbearing age at beginning of five-year period.
† Difference between beginning bearing acreage plus "addition" (i.e., new bearing acreage) and ending bearing acreage.
‡ Per cent of beginning bearing acreage.

Age Distribution of California Apricot Bearing Acreage

Tree age	1943	1948	1953	1958
	Per cent of bearing acreage			
5–8	7.2	4.7	5.1	4.9
9–13	6.8	8.4	6.9	5.8
14–18	16.7	7.1	10.0	7.4
19–23	69.3	16.3	7.9	81.9
24 and over		63.5	70.1	

larger proportion of bearing acreage consisted of trees older than 18 years in 1958 than in 1943, 1948 and 1953. This suggests that removals probably will not be lighter than in recent years.

Of course, we don't know how many acres will be removed from production. The above information, however, suggests that new acreage coming into bearing during the early 1960's will just about offset removals. At least, it does not appear likely that there will be either a large increase or a large decrease.

Yield Projections

The upward trend in average yield during the past 25 to 30 years is due to several factors. Changes in the geographic and varietal composition of California's apricot acreage, such as have taken place, generally represent shifts to more productive areas and to more desirable varieties. This tendency may continue on a long-term basis. But for the immediate future more productive varieties are not in sight and recent plantings have not gone into geographical favored areas.

Better cultural practices introduced over the years also serve to raise the average yield. They will continue to be used, and even improved further, unless prices become so depressed as to make such expenditures excessive. Faced with a greater price-cost squeeze, growers are likely to try to lower their production costs by cutting corners on cultural care given to orchards. But even if this should happen, the better care that trees have already received will have a beneficial effect, though decreasingly so, on yields for the immediate future.

In view of these considerations a small increase in yield (of some 10 per cent to an average slightly above 5.0 tons per bearing acre) appears likely for the early 1960's. It could go even higher. But a sharp increase above the present level is not expected.

As indicated above the yield for apricots varies greatly from year-to-year because of the alternate-bearing tendency of the apricot and for other reasons. Presumably growers will endeavor to modify cultural practices, insofar as possible, to dampen this annual variation in yield. It is expected, however, that for the years immediately ahead yield fluctuations will continue at about the present magnitude.

PRODUCTION AND UTILIZATION

Changes in production are determined by changes in acreage and yield. Our production estimates for the years ahead are based upon the forecasts of bearing acreage and yield discussed above.

Production Trends

The average apricot crop doubled during the quarter century from 1910–19 to 1935–39 and then declined by a quarter to a level of 185,000 tons maintained over the past 20 years. Until about 1930 the production increase was due primarily to a rapid acreage expansion, as shown in figure 3 on page 11. Thereafter acreage declined sharply and yield increased substantially. Since 1940 these opposite movements in the two determinants have just about offset each other so that production has not changed much except for changes from one season to the next.

Annual fluctuations in production have been quite large because of considerable variations in yield. During the past 20 years these short-run changes in production amounted to 95,000 tons, or about 50 per cent of the average crop of 187,000 tons.

Production changed from one year to the next by 135,000 to 245,000 tons in five years since 1939, by 65,000 to 125,000 tons in eight years, and by less than 55,000 tons in seven years.

Production and Utilization of California Apricots, 1910–1959

Five-year average	Production total*	Quantities used for:						
		All sales	Fresh marketings			Drying	Canning	Freezing
			Total	Out-of-state	Intra-state			
	Tons, fresh weight							
1910–14	113,800	112,500	8,640	3,020	5,620	85,020	18,840	0
1915–19	134,800	133,440	10,560	4,740	5,820	83,040	39,840	0
1920–24	141,800	140,280	11,440	5,540	5,900	91,860	36,980	0
1925–29	182,600	180,900	12,300	4,760	7,540	116,640	51,960	0
1930–34	228,200	221,020	18,620	8,580	10,040	166,080	36,320	0
1935–39	250,600	247,300	18,040	6,440	11,600	170,260	59,000	0
1940–44	181,800	179,080	19,480	6,940	12,540	91,760	63,360	4,480
1945–49	203,600	195,700	22,240	10,100	12,140	74,460	89,620	9,380
1950–54	182,600	180,900	18,780	8,720	10,060	57,880	101,540	2,700
1955–59	181,200	179,500	10,900	4,860	6,040	46,500	119,100	3,000

* Difference between total production and all sales consists of small quantities used directly by the farm household (averaging 1,460 tons per year until 1929 and 1,750 tons thereafter) and quantities not utilized for the period since 1930.

Production Projections

From the information now available we conclude that bearing acreage will not change much in the next few years while average yield is likely to increase moderately. Thus, normal crops for the early 1960's should be above the average (182,000 tons) for the 1950's but production is not expected to be more than 5 to 10 per cent above the current average. The projection assumes:

¶ Good cultural practices will continue in the major producing areas, even if prices decline.

¶ Tree removal will be at or near the rate prevailing since 1950.

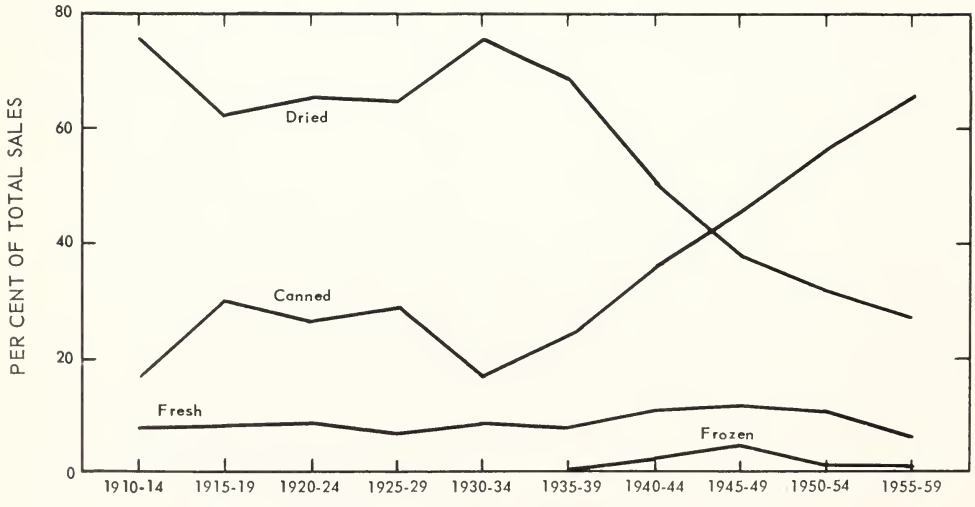

FIG. 4. DISPOSITION OF APRICOT SALES, 1910 TO 1959.

Crop Utilization

Only negligible quantities were not utilized prior to 1930 and in most seasons thereafter. Such quantities exceeded 4 per cent of the crop during only three seasons: 1930, 1932, and 1948. Smaller quantities were left unharvested in four other seasons. The table on page 14 summarizes data on utilization for the past 50 years.

Until the late 1930's the utilization pattern remained fairly stable. About 68 per cent of the sales were dried, 24 per cent were canned, and 8 per cent were shipped fresh.

Figure 4 on page 14 indicates that the relative importance of drying and canning was reversed after 1940. Quantities dried declined rapidly to 26 per cent of total sales in 1955–59 while canning rose to 66 per cent. This means that during the past 20 years (when production continued at the same average level) drying decreased from 170,000 tons in 1935–39 to 46,500 tons in 1955–59, while canning increased from 59,000 to 119,000 tons.

Quantities frozen were appreciable only during the war period, especially 1944–46 when an average of over 20,000 tons entered this outlet. They averaged only 2,000 tons in 1947–54 and 3,000 in 1955–59.

Fresh shipments decreased sharply. Such sales averaged only 10,900 tons (6.1 per cent of all sales) in 1955–59 compared to 19,400 tons (or 9.5 per cent) for the 25-year period 1930–54 and a peak of 22,200 tons (11.4 per cent) in 1945–49.

Some further changes in the utilization pattern for apricots appear likely for the next few years. Canning probably will expand to at least 70 per cent of all sales, compared to 40 per cent in 1940–49 and 61 per cent in 1951–59. It is expected that the freezing outlet will continue to take about 3,000 tons per year. Fresh shipments are not likely to decline further, but a sharp increase appears unlikely. If these changes occur, as seems probable, the use of apricots for drying will decrease to about 40,000 tons, or 20 per cent of an average crop.

FRESH CONSUMPTION

For the past several decades about one-tenth of the California apricot crop has been marketed fresh. Somewhat over half of this quantity went to local markets. The following sections briefly describe some of the methods used in handling apricots for fresh shipments and discuss the source and destination of these sales, particularly auction markets, the main outlet for out-of-state fresh shipments.

Preparation for Market

Apricots intended for fresh use usually are thinned more severely than those to be processed, to get a larger proportion of the larger sizes which sell at premium prices. These apricots are harvested at an earlier stage of maturity, even though the fruit has not yet reached its best flavor, because the firmer, i.e., "greener," apricots hold up better during transportation and numerous rehandlings.

Ranch packing has been largely replaced by central packing houses, which are equipped to handle and cool the fruit rapidly. These plants receive the apricots from various producers, pack them, assemble the cars, and make sales.

For local sales apricots generally are packed loose in a variety of containers. The fruit may be shipped without a lid on the container.

Practically all apricots shipped from California are packed in lugs with approximate inside dimensions of $4\frac{5}{8} \times 12\frac{1}{2} \times 16\frac{1}{8}$ inches. Usually the fruit is "face and fill" packed. For this method of packing the lug is made with the top in place and the bottom open. The top layer

or two of fruit is packed in a regular arrangement before the remainder of the lug is loose filled and the bottom is nailed on. In the face layers the fruit is placed in a square pattern for the square pack and in a diamond pattern for the offset pack.

The number of apricots per row in the face layers designates fruit size, with fractional counts denoting offset packs. Thus 6-row (or 7-row) means a straight pack of 6 (or 7) apricots per row while the 6½-row count indicates an offset pack of 6 apricots per row, with a half space at one end of each row.

Truck shipments to out-of-state markets have increased considerably since World War II. The volume moved by trucks cannot be determined from official data because information on this movement is fragmentary. It is known, however, that truck shipments have increased considerably and that most of them are destined for markets located in western states. The great bulk of the shipments to more distant markets are still made by rail. Although some mixed cars (containing part loads of other fruits) are loaded, practically all of the interstate shipments consist of straight cars.

Criticism has been directed at possible inefficiencies in the marketing process and at the large distributive margins involved in moving apricots from the producing areas to consuming markets.

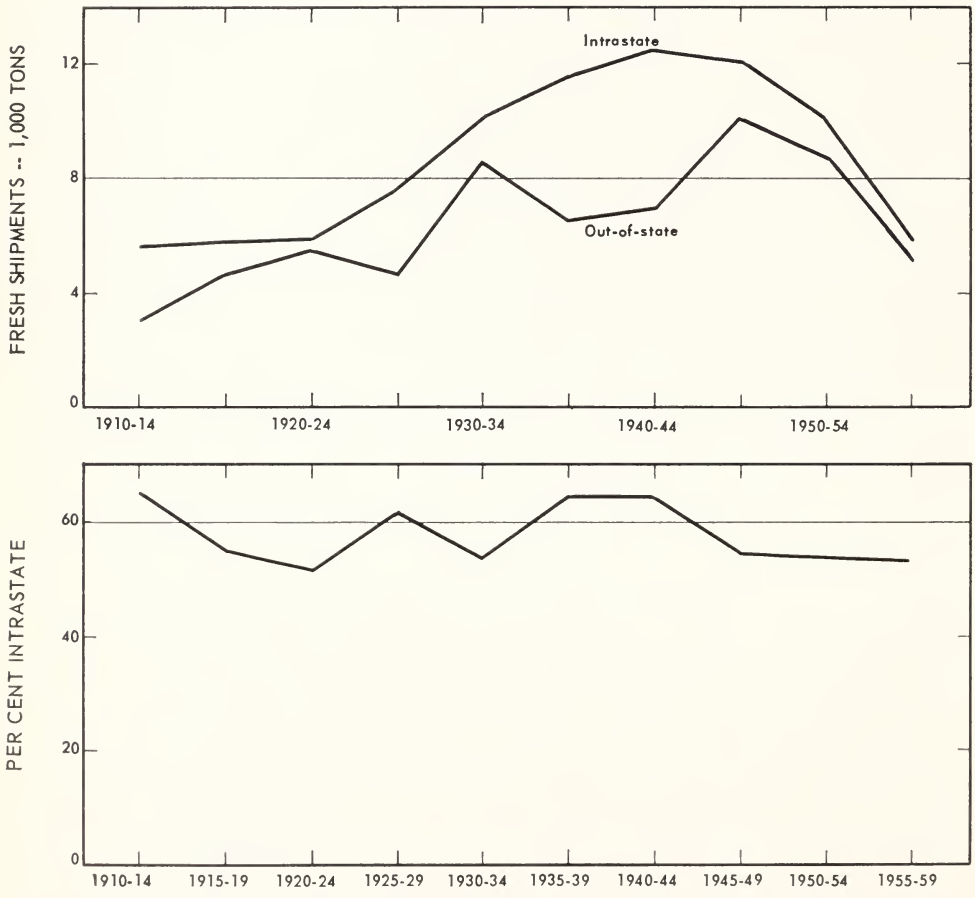

FIG. 5. OUT-OF-STATE AND INTRASTATE FRESH APRICOT SHIPMENTS, 1910 TO 1959.

Little information is available for measuring these margins accurately and for indicating what economies might be effected. Although many improvements have already been introduced, there undoubtedly is further need for securing faster movement, better equipment, and lower costs.

Fresh Sales

Figure 5 shows the volume of fresh marketings during the past 50 years. They indicate clearly that out-of-state and local sales changed similarly over the years. Since 1910, the proportion of fresh marketings sold within the state generally varied between 50 and 68 per cent. It exceeded 68 per cent in only six of the 50 years and was below 50 per cent in six years.

During this half century fresh sales increased rapidly to a peak in 1945–49 and then decreased even more sharply to the present average which is barely above the 1915–19 level. Intrastate sales rose from 5,780 tons per year in 1910–24 to 12,540 tons in 1940–44 before declining to 6,040 in 1955–59. Out-of-state sales were 4,430 tons in 1910–24, at a peak of 10,100 in 1945–49, and 4,860 tons in 1955–59.

Because of a rapid population growth, especially in California, per capita consumption followed a somewhat different course. It remained almost constant until World War II and then declined very sharply. During the interwar period (1920–39), the typical Californian bought 3.26 pounds of California fresh apricots annually, compared to 0.11 for the remainder of the country. By 1955–59 per capita consumption decreased by 73 per cent (to 0.87 pounds) in California and by 44 per cent (to 0.06) in other states.

These comparisons exclude farm use

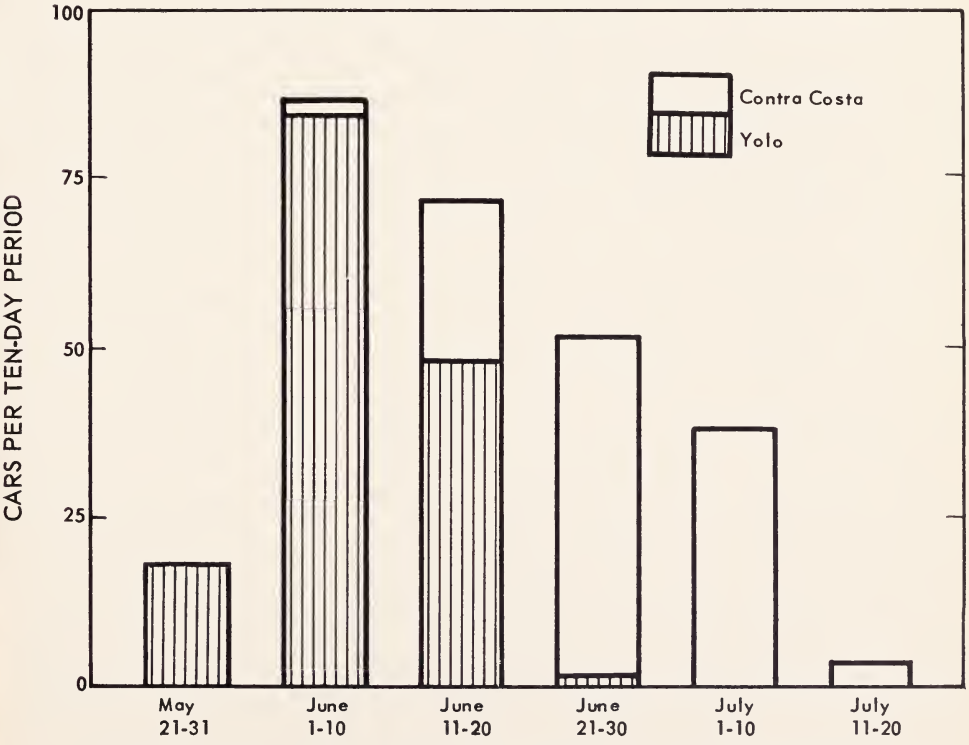

FIG. 6. OUT-OF-STATE RAIL PASSINGS OF FRESH CALIFORNIA APRICOTS, BY COUNTY, TEN-DAY PERIODS, 1955–59 AVERAGE.

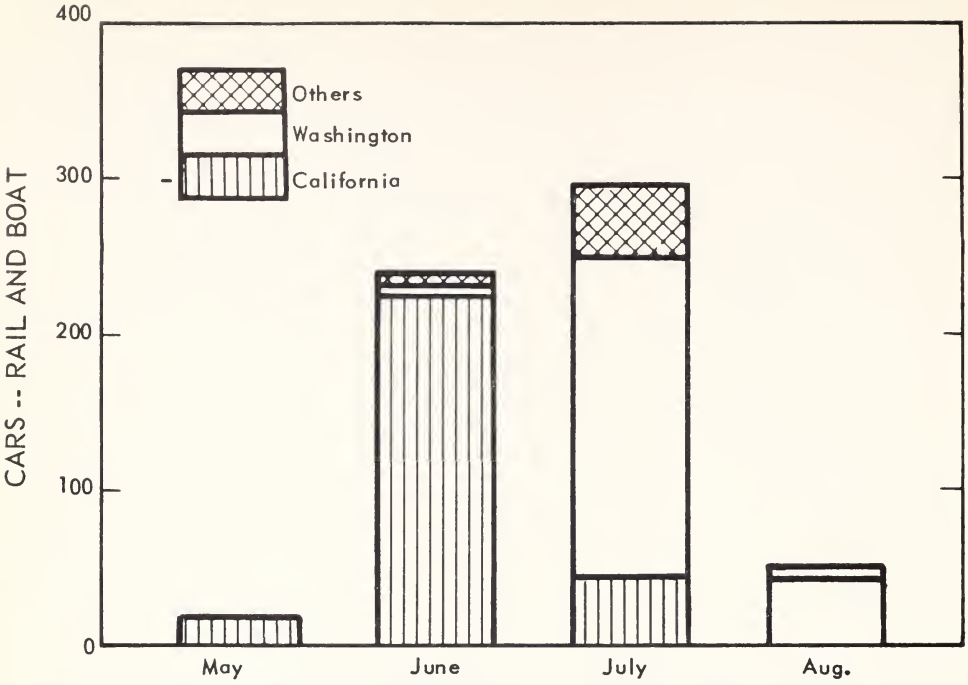

FIG. 7. MONTHLY CARLOT APRICOT SHIPMENTS, BY STATE, 1955–59 AVERAGE.

of apricots within the state and the use of apricots produced in other states. That is, they merely relate intrastate and out-of-state fresh sales of California apricots to the population within this state and in all other states. If the total of fresh sales and farm use is compared, the per capita use declined from a peak of 4.0 pounds in the 1930's to 1.1 in California and from a peak of 0.42 pounds in 1940–49 to 0.22 in other states.

Out-of-state Shipments

Practically all California apricots shipped fresh from the state originate in two counties: Contra Costa and Yolo. The separation of their shipping seasons is clearly evident in figure 6 on page 17, which indicates out-of-state rail shipments in 1955–59 by 10-day periods. Substantial quantities are shipped from both counties only during mid-June. Almost two-thirds of the fresh apricots from Yolo County are shipped by June 10 before shipments from Contra Costa begin. The latter county ships 80 per cent of the apricots after June 20.

California markets its apricots before shipments from other states become large. Figure 7 above indicates monthly movement of carlot shipments for 1955–59. During May and June, when California ships the bulk of its fresh apricots (80 to 85 per cent of the season total) movement from other states is insignificant. After July 1 about two-thirds of the apricots come from Washington, 15 per cent from California, and 18 per cent from other states.

In other words, California's apricot industry has a distinct advantage, relative to other states, in marketing its fruit for fresh use because its supplies are marketed before those from other states arrive. California apricots are also marketed before most other fresh fruits are sold. Although apricots constitute only 3 per cent of the fresh deciduous tree fruits shipped from the state, they account for some 12 per cent of the volume

moved during May–June. The brief summary in the table below indicates the importance of apricot shipments for May–July relative to other fruits in 1950–59.

During June, when most California apricots move to market, shipments of cherries and strawberries are past their peak, plums and melons are in heavy supply, and most other California deciduous fruits are just beginning to be shipped. For example, peaches and nectarines reach peak movement in July, pears and apples in August, and grapes in September or October.

Auction Marketings

The distribution of sales among individual auction markets has not changed much during the past quarter century. Since 1935 about 51 per cent of auction sales were made at New York, 18 at Chicago, 11 at Philadelphia, and 20 at the nine other markets. One minor exception to this distribution pattern occurred. Relative sales declined somewhat at New York and increased correspondingly at Philadelphia. But this shift amounted to only 3 percentage points.

The table on top of page 20 indicates a definite trend toward greater private transactions in selling apricots. Such sales expanded from one-fifth to one-third of out-of-state shipments since 1935–39. A further shift, though possibly of a smaller magnitude, appears likely for the 1960's.

Generally the auction price is 6 to 8 per cent higher at New York than at other markets. Part of this differential is due to differences in transportation costs. Differences in the varietal composition of sales made at the various auctions and in the timing of those sales also are of considerable importance.

A direct comparison between auction prices and private-sale prices is not possible since the latter are not published. Information secured informally from California shippers indicates, as would be expected, that New York auction prices are a good indicator of the general level of wholesale prices on all sales. Varietal and seasonal price differentials for private sales are similar to those for auction sales.

The following discussion refers to New York auction sales and prices. As indicated, these sales represent over one-third of interstate shipments and the prices are reasonably satisfactory for making comparisons. Thus New York auction data

Rail Carlot Shipments of Certain California Fruits, 1950–59

Commodity	1950–54 average			1955–59 average		
	May	June	July	May	June	July
Apricots	20	434	95	22	223	46
Cherries	302	471	0	191	416	0
Plums	80	1,517	1,328	124	1,386	1,406
Other deciduous tree fruits	12	357	3,850	39	611	3,190
Subtotal	414	2,779	5,273	376	2,636	4,642
Grapes	20	630	1,716	60	660	1,895
Melons	1,010	4,118	4,978	426	2,707	5,924
Strawberries	666	286	207	996	712	483
Grand total	2,110	7,813	12,174	1,858	6,715	12,944

Auction Prices and Sales Distribution of California Apricots, 1935–59

Market	1935–39	1940–44	1936–49*	1951–54*	1955–59
	Auction price—dollars per lug				
New York auction	1.47	2.55	2.67	3.99	4.45
Twelve auctions	1.41	2.48	2.59	3.88	4.26
	Sales—1,000 packages (lugs and other containers)				
Auction markets					
New York	223.1	206.6	259.0	196.8	143.7
Chicago	79.4	69.0	105.1	88.7	44.1
Philadelphia	38.3	39.7	70.5	48.6	32.4
Three major markets	340.8	315.3	434.6	334.1	220.2
Nine minor markets	85.8	77.3	146.3	76.8	55.4
All markets	426.6	392.6	580.9	410.9	275.6
Private sales†	110.1	185.7	219.1	222.4	129.4
Interstate shipments‡	536.7	578.3	800.0	633.3	405.0
	Per cent of interstate shipments				
New York auction	41.6	35.7	32.4	31.1	35.5
Other auctions	37.9	32.2	40.2	33.8	32.5
Private sales	20.5	32.1	27.4	35.1	32.0

* Excludes 1945 and 1950 as unrepresentative years.
†Difference between auction sales and out-of-state shipments.
‡ Converted from tonnage figures at 83⅓ packages (of 24 lbs) per ton.

New York Auction Sales and Prices of California Apricots, 1940–59

Variety	1940–44	1946–49	1950–54	1955–59
	Sales—per cent of season total			
Royal	66.8	60.0	63.5	60.7
Tilton	29.9	36.6	31.9	30.2
Other	3.3	3.4	4.6	9.1
	Price—per cent of season average			
Royal	103.3	107.3	101.9	98.7
Tilton	93.2	87.0	94.0	97.7
Other	120.5	153.8	128.2	123.0

are sufficiently representative of all out-of-state marketings to indicate satisfactorily changes in the varietal composition of sales, in their seasonal distribution, and in relative prices for the various components of sales.

Varietal Composition

The lower table on page 20 presents varietal sales and prices at New York auction for the past 20 years. These data, expressed in percentage terms, are shown by five-year averages to eliminate annual fluctuations.

Relative sales of minor varieties expanded considerably since 1940–49—from 3 to 9 per cent of the total. Sales of the two major varieties declined somewhat—from 64 to 61 per cent for Royal and from 33 to 30 per cent for Tilton.

The price premium for Royal, relative to Tilton, increased during the 1940's and then decreased. By 1955–59 these major varieties were selling at about the same price. Minor varieties sold for substantially higher prices, especially in 1946–49.

Temporal Distribution

Figure 8 below portrays weekly sales, by varieties, at the New York auction market in 1955–59. This distribution is similar to the pattern during the preceding decade when allowance is made for the larger marketing season which then existed.

The extent to which the two major varieties are sold at different periods is clearly apparent. Only during one week (the fifth of the season, centered at approximately July 1) do sales consist of substantial quantities of both Royal and Tilton varieties. During earlier weeks (i.e., the month of June) over 90 per cent of the sales are Royals while sales of Tiltons are negligible. After the fifth week sales are chiefly of the Tilton variety.

PROCESSING USES

The importance of processing outlets for California apricots is evident in figure 4 on page 14. For the past 50 years,

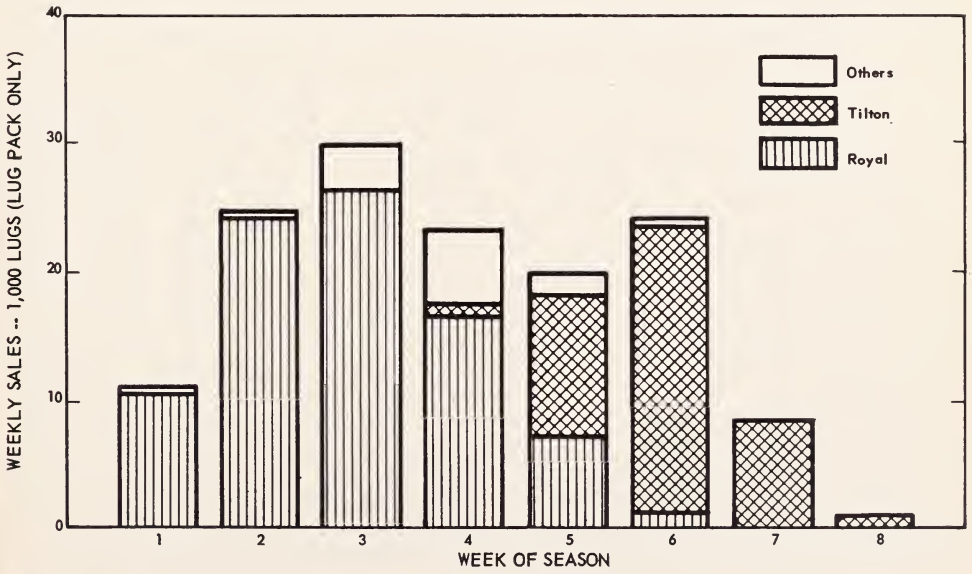

FIG. 8. WEEKLY NEW YORK AUCTION SALES OF CALIFORNIA APRICOTS, BY VARIETY, 1955–59 AVERAGE.

about 90 per cent of total sales have been made to processors. At present 65 per cent of the sales are for canning and 25 per cent for drying. This is a reversal of the situation in previous years—say, during 1915–29—when only a quarter was canned and two-thirds was dried.

Processing Outlets

Each year four million cases of canned apricots are produced and the equivalent of one-quarter million cases is used in the pack of fruit salad. Thus, about 15 times as many apricots are used for canned apricots as for fruit salad.

During recent years increasing quantities of cannery apricots have gone for producing other items. The output of canned baby foods, of which pureed apricot is a major item, expanded enormously from its small pack produced in the early 1940's. At about this same time the manufacture of apricot nectar was introduced. It has increased considerably since World War II.

Most dried apricots are sold without being mixed with other dried fruits. There is no essential difference in processing operations between dried apricots used alone and those to be mixed with other dried fruit. A substantial portion of the dried-apricot exports are in fruit salad. This item is much less important for domestic sales.

Apricots are also frozen. Freezing was a significant outlet during the war period. More than twice as many apricots were frozen in the four years, 1943–46, as in the entire subsequent period. Now only 3,000 tons, or 1½ per cent of the California crop, enter the freezing outlet.

Canned Pack

Canning of California apricots tripled during the past quarter century—from an annual volume of 42,000 tons in 1920–34 to 61,000 tons in 1935–44 and 119,000 tons in 1955–59. The California pack of canned apricots, however, only doubled during this period because of the rapid expansion in the use of cannery apricots for other purposes. The pack averaged 2.3 million cases (equivalent 24 No. 2½ cans) in 1920–39 and 4.1 millon since 1940.

Annual fluctuations in the pack are substantial. During the past 20 years these short-run changes amounted to 2.5 million cases—over 60 per cent of the average pack—compared to 50 per cent fluctuations in production. The year-to-year changes in the pack exceeded 3 million cases in six of the past 20 years, were 1.5–3 million in eight, and fell below 1.5 million in six.

There has been a substantial change in the relative use of different container sizes. The shift toward a much greater use of smaller containers is shown in figure 9. In interpreting this information special attention must be given to 1943–46. During the war period, the War Production Board restricted the use of small containers to conserve critical materials in short supply. Consequently almost the entire pack was in No. 2½ and No. 10 cans.

Following the war, the pack in No. 10 cans (destined largely for institutional uses) continued at about the prewar volume. But as the total pack increased, the proportion represented by No. 10 declined from one-third to one-fourth of the total. The pack in No. 2½, although increased by a third, also declined on a relative basis—from 45 to 38 per cent. Packs in smaller containers tripled between 1933–40 and 1955–58 and increased from 22 to 38 per cent of the total. No. 2 and No. 1 tall cans, representing one-sixth of the prewar pack, are no longer used. No. 303 and No. 300, introduced since the war, now account for almost 30 per cent of the cases packed. The small 8-oz. can increased from 5 to 10 per cent of the pack since 1933–36.

California's pack represents the great bulk of the canned apricots produced in the country. For the period since 1930,

California packed 97 per cent of the total. Practically all the remainder is canned in Washington and Utah, where the pack exceeds 200,000 cases in only one year in seven.

The carry-over of California canned apricots into the new pack year averaged 550,000 cases since 1930—or about 15 per cent of the annual pack. In five of these 30 years the carry-over exceeded 1.0 million cases, in five it was less than 150.000. Thus, in two of three years beginning stocks (June 1) ranged from 150,000 to 1,000,000 cases.

Dried Pack

Apricots are dried commercially only in California. Full-mature fruit is cut around the suture line, placed cavity upward on a drying tray, sulfured, exposed to the sun, and then shipped to a dried-fruit packer. Sulfuring usually takes only a few hours, say three or four. This operation hastens the drying process,

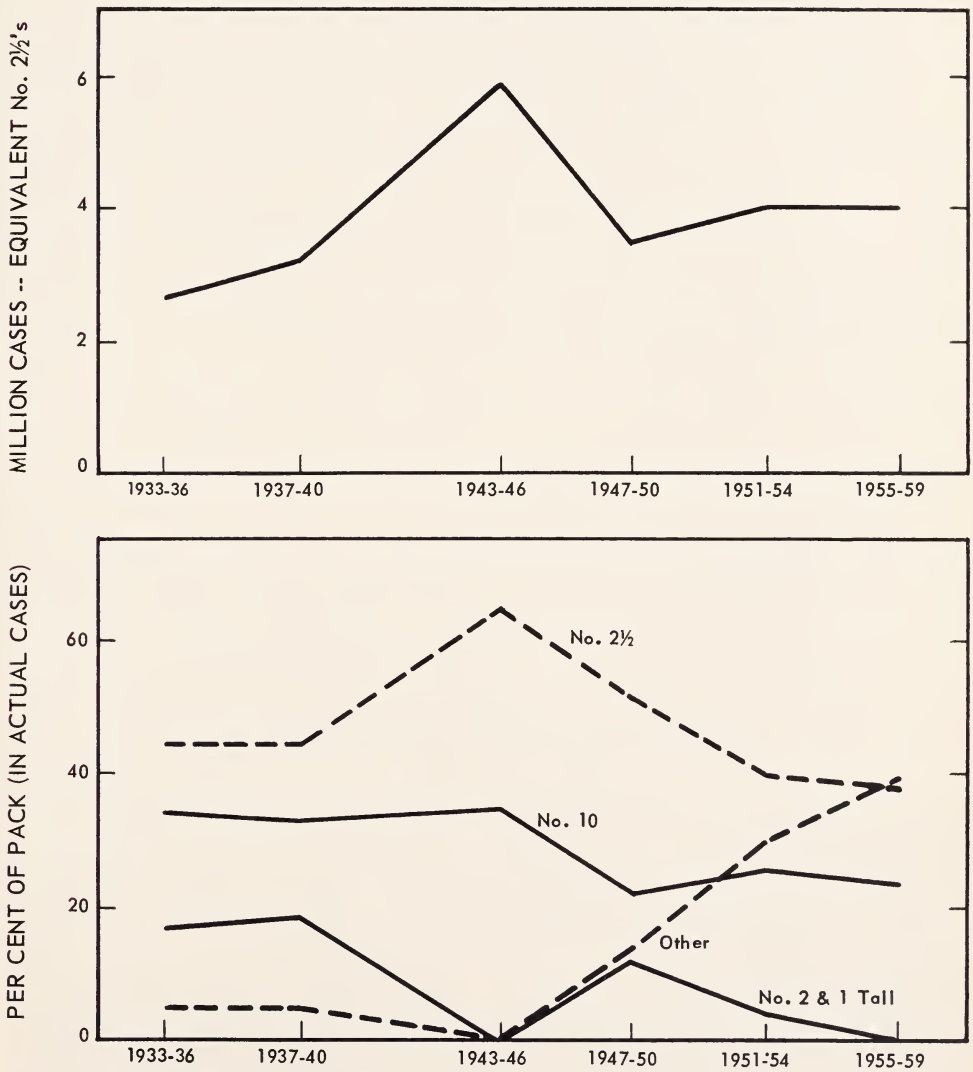

FIG. 9. U. S. PACK OF CANNED APRICOTS, BY CAN SIZE, 1933 TO 1959.

bleaches the fruit, repells insects, and retards deterioration. Upon removal from the sulfur house the fruit on trays is placed in the dry yard and exposed to the sun. This exposure, which requires about one to seven days depending on temperature and humidity, completes the grower's operations. The natural conditioned dried apricots, however, must be processed and packaged before they are ready for distribution to consumers.

The pack increased from 15,800 dry tons in 1910–24 to 30,600 in 1930–39, declined sharply to 15,100 tons during the 1940's. A further subsequent decrease brought the average pack down to only 8,500 tons in 1955–59—only 27 per cent of the peak volume dried 20 years earlier.

The pack varies considerably from year to year. These short-run changes amounted to 7,900 tons during the past 20 years—about 65 per cent of the average pack. They were under 3,000 tons in seven years, 4,800 to 7,800 tons in six, and over 9,000 in seven.

Domestic Use

Exports of processed apricots, although considerably below prewar, are still substantial. The importance of export sales is discussed in the next section. The domestic shipments of California canned and dried apricots, together with the equivalent per capita figures, covering the period since 1925 are shown in the table below.

Domestic shipments of canned apricots (including that portion of fruit salad consisting of apricots) expanded sharply 20 years ago. They increased 60 per cent from 2.5 million cases in 1925–39 to 4.0 million in 1940–59. Domestic sales of dried apricots reached a peak of 17,000 dry tons in the 1930's and then declined sharply to an average of 7,000 dry tons in 1955–59.

On a per capita basis annual consumption of canned and dried apricots is 1.2 pounds (fresh-fruit equivalent)—almost 40 per cent below the peak level reached in 1930–39. Most of this decline is due to a reduced consumption of dried apricots. Americans now consume an average of 0.08 pounds per person compared to 0.27 pounds in 1930–39. Average consumption of canned apricots is 0.57 cans per person, down 11 per cent from the peak during the 1940's.

EXPORTS

Foreign markets have been an important outlet for California apricots, especially during prewar years. They took about 50 and 20 per cent, respectively,

Domestic Shipments of California Processed Apricots, 1925–59

Item	1925–29	1930–39	1940–49	1950–54	1955–59
Total shipments					
Canned* (1,000 cases, No. 2½)	2,000	2,180	3,860	3,800	3,750
Dried (dry tons, processed)	11,840	17,020	12,130	11,700	7,010
Shipments Per Capita					
Canned* (cans, No. 2½)	.40	.41	.62	.58	.53
Dried (pounds)	.20	.27	.17	.12	.08
Total (fresh pounds)	1.58	1.95	1.74	1.41	1.15

* Includes an allowance for apricots in fruit salad figured at 25 per cent of the salad pack.

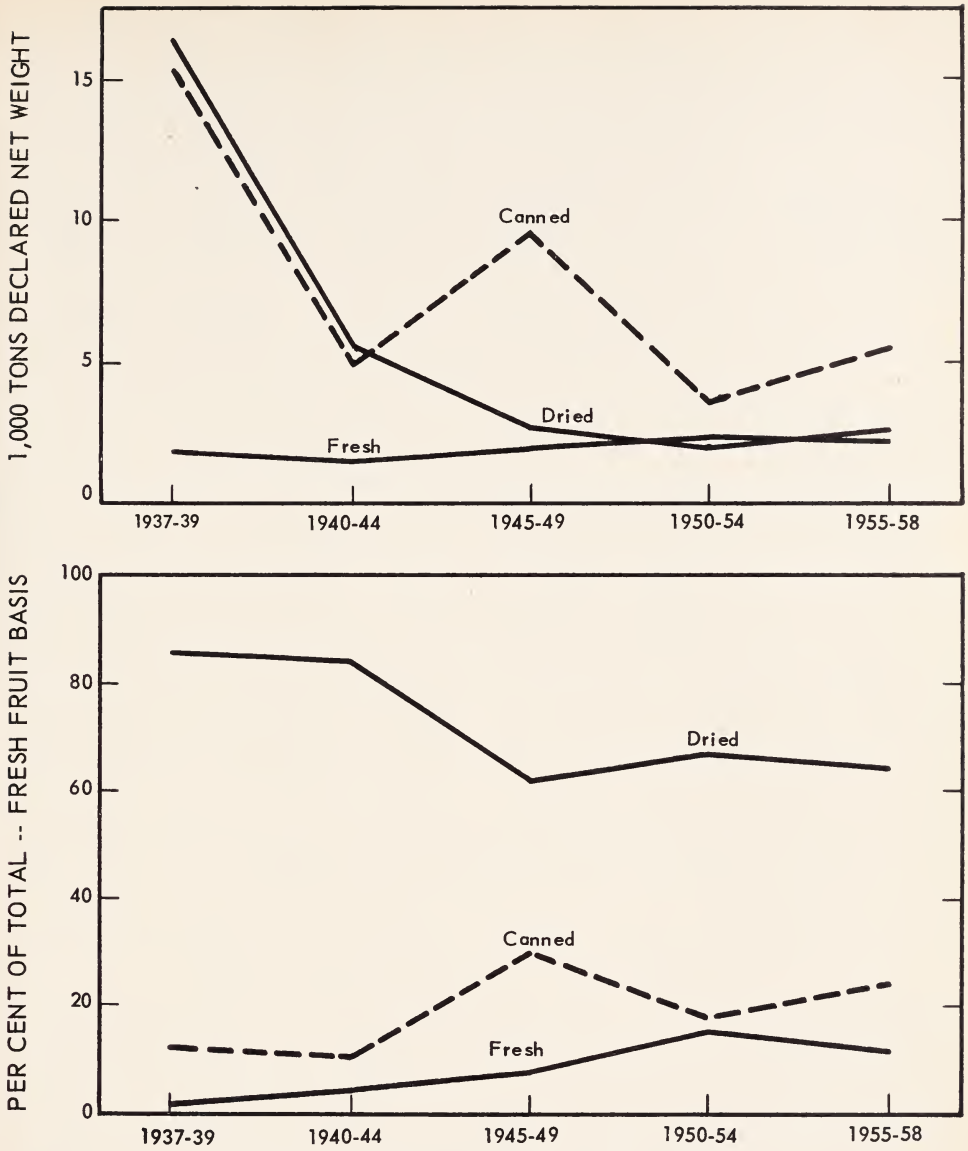

FIG. 10. U. S. APRICOT EXPORTS, 1937 TO 1958.

of the dried and canned apricots packed in the 1930's. Exports still are important to the apricot industry.

Total Exports

Apricot exports averaged some 60,000 tons (fresh-fruit basis) in 1920–29, increased to about 93,000 tons in 1930–39, and then decreased to 16,000 tons for 1950–58. Their importance declined from 39 per cent of the crop in 1920–39 to 8 per cent since 1950. This sharp decline in exports (to only one-sixth of the 1930–39 average) was due principally to reduced shipments of processed apricots.

Figure 10 above shows the major changes in exports during the past quarter century. Exports of both dried and canned apricots declined sharply during

U. S. Exports of Canned and Dried Apricots, 1930–59*

Destination	1930–38	1940–44	1946–54	1955–59
	Tons—fresh fruit equivalent			
United Kingdom	14,700	19,700	900	400
Other Europe	63,600	3,300	9,600	7,800
Non-Europe	6,600	9,600	5,300	3,900
Total	84,900	32,600	15,800	12,100
	per cent of total listed			
Shipped to Non-Europe	7.8	29.3	33.4	32.1
Shipped as canned	10.8	11.4	26.5	31.1

* Excludes apricot portion in canned and dried fruit salad.

World War II and remained low thereafter, relative to prewar shipments. Fresh apricot exports, however, remained fairly constant, on the average, for the period since 1937. Expressed in per cent, dried-apricot exports decreased from 85 to 65 per cent of the total (fresh fruit basis), while exports of canned and fresh apricots increased from 13 to 24 and 2 to 11 per cent, respectively.

Data on canned and dried apricots alone (as summarized in the table above)

Exports of California Dried Apricots, 1925–59

Destination	1925–29	1930–39	1940–44	1945–59
	dry tons—processed weight			
As apricots				
United Kingdom	1,070	1,440	3,380	50
Western Europe*	5,890	10,340	270	870
Other Europe	2,170	2,630	340	380
Canada	800	770	550	450
Other countries	420	520	1,070	220
Subtotal	10,350	15,700	5,610	1,970
In dried salad	500	870	110	330
Total	10,850	16,570	5,720	2,300
	per cent			
Shipped to Europe	88.2	91.8	71.1	66.0
Shipped in salad	4.6	5.2	1.9	14.3
Of California pack	47.8	48.0	32.0	20.1

* Includes France, Germany, Netherlands and Belgium.

indicate that the decline in exports resulted mainly from a loss of the European market. Exports of canned and dried apricots to Europe are only a tenth of prewar, while shipments to other countries declined 40 per cent. Thus exports to non-European markets rose from 8 per cent of the total in 1930–39 to 32 per cent since 1940.

Dried-Apricot Exports

Before World War II large quantities of dried apricots were exported, chiefly to Western Europe. About 16,600 dry tons were shipped annually during the 1930's. Three quarters of this quantity went to five countries (France, Germany, United Kingdom, Netherlands, and Belgium), 17 per cent to other European countries, and 8 per cent to non-European markets. Export data appear in the table on the bottom of page 26.

Since 1945 shipments to Europe have been small—9 per cent of prewar. Exports to other countries also declined, but only to a half of the 1930–39 average. Total exports, including dried apricots in fruit salad, remained at about 2,300 dry tons in 1945–59—or only 14 per cent of the average for 1930–39. Exports declined from half of the prewar pack to only one-fifth since 1945.

Exports of dried fruit salad also decreased, but less sharply. As a result the proportion of dried-apricot exports represented in fruit salad rose from 5 per cent prewar to almost 15 per cent in the postwar period.

Canned-Apricot Exports

Shipments abroad declined from 690,000 cases per year in the late 1920's to 195,000 in 1950–59. Since the domestic pack expanded considerably during this period, the relative importance of our foreign market shrank even more. Exports decreased from 25 per cent of total shipments in 1925–29 to 5 per cent since 1950. The table below presents the pertinent export data.

United Kingdom has almost disappeared as an outlet. This market now takes only 5,000 cases annually compared to 530,000 cases in 1925–29. Current shipments to other countries are 50 per cent higher than in 1925–29. At present about 60 per cent of our exports go to Belgium and Canada; a quarter to the

U. S. Exports of Canned Apricots, 1925–59

Destination	1925–29	1930–39	1940–49	1950–54	1955–59
	1,000 cases—basis No. 2½				
United Kingdom	530	454	125	22	5
Belgium	*	*	80	60	71
Other Europe	86	59	28	18	74
Canada	30	4	18	40	65
Other non-Europe	33	19	72	16	18
Total	679	536	323	156	233
	Per cent				
Shipped to United Kingdom	78.1	84.6	38.9	14.3	2.2
Of California shipments	25.3	19.8	7.7	4.0	5.6

* Included in "other Europe."

Netherlands, West Germany, Sweden and Norway; and 15 per cent to other countries.

Fresh-Apricot Exports

Since 1937, when data were first reported, fresh exports averaged 1,940 tons per year. The quantity shipped to foreign markets varies considerably from year to year because of large annual fluctuations in the United States crop. In about three years during each decade exports either exceeded 3,000 tons or went below 1,000. Shipments since 1950 have been 20 per cent above the average for 1937–49.

These exports are not shipped far. For example, in 1955–59 about 92 per cent went to Canada and 7 per cent to Mexico.

RETURNS TO PRODUCER

As used in this circular, "farm price" refers to the payment received by producers for "naked fruit at the first delivery point." Such prices have been reported by the California Crop and Livestock Reporting Service for each year since 1909 for the apricots sold in each utilization outlet and for "all uses." Other meanings for farm prices may be used depending upon a varying amount of "added services" rendered by the producer—e.g., for fruit on the tree, for fruit delivered by the grower to a packing house or processing plant, for fruit sold by him to a wholesaler or retailer, etc.

General Level

Fluctuations in farm prices to apricot producers result mainly from changes in production and consumer purchasing power. Both factors have varied widely in the past. Prices ranged from a low of $18 per ton in 1932, at the depth of the depression, to a record high of $157 in 1958, when demand was strong and a very small crop was produced.

The effect of consumer purchasing power is shown by noting the general movement of the average farm prices during several decades. Prices dropped sharply from an average of $60 per ton in 1920–29 to an average of $26 in 1931–33. They increased, but only gradually, over the next decade to $56 in 1940–42. Prices rose immediately to $110 for the war period (1943–46) and remained at a slightly higher level ($116) since 1950.

For many fruits year-to-year price changes are substantial and are definitely correlated with opposite changes in annual production. Such does not appear to be the case with apricots. For example, since 1943 (when the price averaged $113 per ton) the price changed, from one season to the next, by more than $30 in only two years compared to six variations of $18 to 28 and eight of $3 to 14. Furthermore, the correlation between price changes and production changes is negative, as would be expected, but it is not very pronounced. (In statistical terms, the rank correlation is $\rho = -0.44$, which indicates that for this period about one-fifth, ρ^2, the fluctuation in the farm price from year to year is explainable by annual variations in production. A considerably higher value is secured for most fruits.)

Returns by Outlets

Figure 11 indicates the general relationship among farm prices prevailing in the various outlets for the past 50 years. There is a definite pattern of relative prices. Generally farm prices are highest for out-of-state fresh shipments and lowest for cannery sales. For fresh local sales, prices are about 10 per cent below those received for out-of-state shipments. On an equivalent fresh basis dried apricot prices are roughly equal to those for fresh local sales.

The lower two panels of figure 11 show that relative prices changed substantially during the past half century. Relative prices for cannery apricots declined

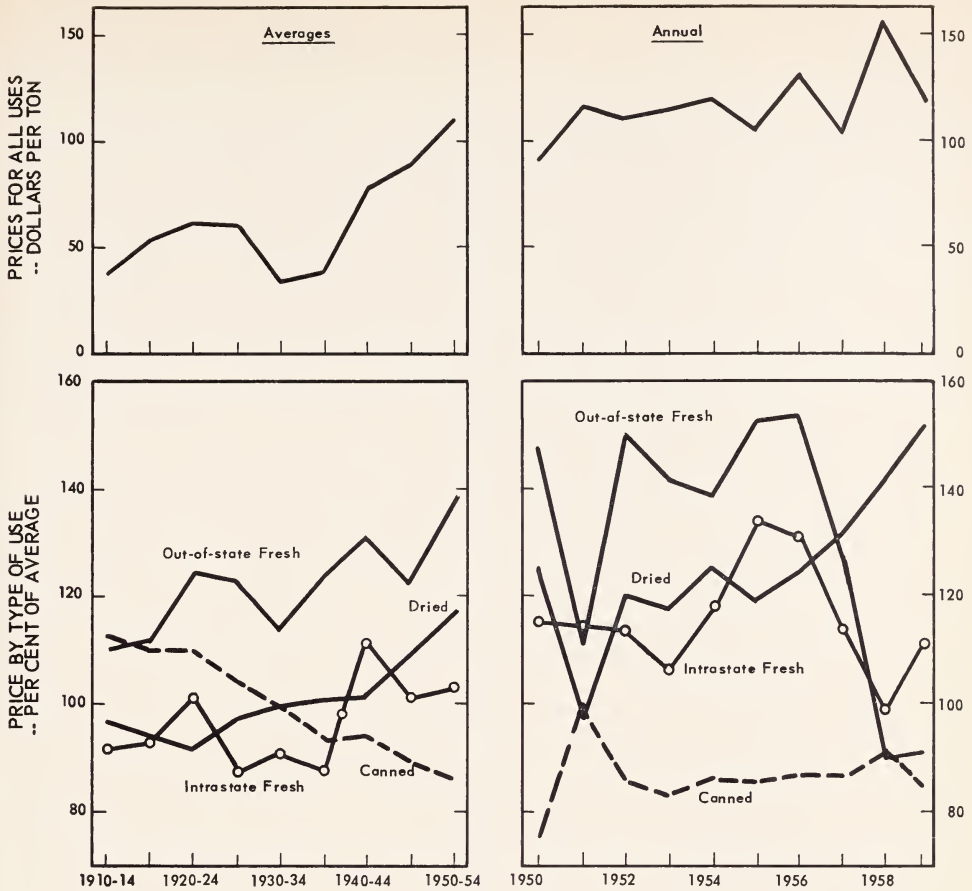

FIG. 11. GROWER PRICES, BY TYPE OF UTILIZATION, 1910 TO 1959.

steadily throughout the period—from 11 per cent above the average in 1910–1919 to 14 per cent below since 1950. They advanced from 95 to 126 per cent of the average for dried apricots and 100 to 122 per cent for fresh shipments.

Future Returns

If, as indicated above, future production continues at about the present level, there may be a moderate increase in apricots available for canning since fresh sales and drying are likely to decrease still further. If consumer purchasing power continues to climb at or near the present rate, demand for apricots in fresh and processed form will expand.

Under these circumstances farm prices should increase. In years when bumper crops are produced, however, grower returns will decline, as they have in the past.

Farm prices for cannery, dried, and fresh apricots should continue at about present relationships. This conclusion is reached in spite of the fact that the proportions of the crop entering the three major outlets is expected to change somewhat.

The tables and charts used in this circular are summaries of more detailed information appearing in "Mimeographed Report No. 223," published in December 1959. This report gives sources in detail. It may be obtained by writing to the Giannini Foundation of Agricultural Economics, University of California, at Berkeley or at Davis.

Co-operative Extension work in Agriculture and Home Economics, College of Agriculture, University of California, and United States Department of Agriculture co-operating. Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914. George B. Alcorn, Director, California Agricultural Extension Service.

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